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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,101	08/10/2006	Yvon Gourhant	127905	4688

25944 7590 11/19/2010

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EXAMINER	
BAIG, ADNAN	
ART UNIT	PAPER NUMBER
2461	

NOTIFICATION DATE	DELIVERY MODE
11/19/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com
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Office Action Summary	Application No.	Applicant(s)	
	10/578,101	GOURHANT ET AL.	
	Examiner	Art Unit	
	ADNAN BAIG	2461	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allen et al. US (2004/0121792) in view of Chen et al. USP (7,283,466), further in view of Kennedy USP (6,754,192), and further in view of Upton US (2003/0093403).

Regarding Claim 1, Allen discloses a method of notifying, within one node (**see Fig. 2, Node 102**) of an ad-hoc network (**see Fig. 2 & Para [0005] & [0021]**), changes of state of the ad-hoc network to at least one application (**see Fig. 3, Application 316**) of an application layer (**see Fig. 3, Application Layer 314**) of the ad-hoc network and adapted to execute on the ad-hoc network (**see Fig. 3 & Para [0026]**), the at least one application being sensitive to changes of state of the ad-hoc network (**see Fig. 4, Step 418**), the method comprising the following steps, performed on said one node of the ad-hoc network:

said at least one application of the one node (**see Fig. 3, Application 316**) with a change of state notification means provided on the one node, (**see Fig. 4, Step 418 & Para [0025-0026] & [0033-0035]**)

extracting routing information from a transport or network layer (**see Fig. 3, Network Layer 312**) of the ad-hoc network (**see Fig. 2**), with said change-of-state notification means, (**Referring to Fig. 3, when the device 102 receives a command to operate according to another routing protocol, routing information will be extracted from (308, 310, 312) via Network Layer 312, see Fig. 4 Step 418 & Para [0025] - [0026] lines 5-9 & Para [0033] e.g., switching to another protocol**)

While Allen discloses an application of the application layer, which uses a particular networking routing protocol, where a change to another routing protocol may be implemented based on which particular routing protocol works best for the application, (**Para [0026] lines 5-9**), Allen does not expressly disclose forwarding said routing information extracted by the notification means to the application, so that the application can exploit said routing information. However the limitation would be rendered obvious in view of the teachings of Chen et al. USP (7,283,466).

forwarding said routing information extracted by the notification means to the application (**see Fig. 1, SLM 102**), so that the application can exploit said routing information, (**see Fig. 6B & Col. 2 lines 44-59 & Col. 6 line 57 – Col. 7 lines 1-5**)

(Referring to (**Col. 2 lines 44-50**), Chen suggests the SLM 102 (**e.g., application**) monitors the status of services on the network, hence it is desirable for the SLM 102 to receive notification of change in a service, for example when a physical route of the service changes).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for forwarding said routing information extracted by the notification means to the application of the application layer of Allan by implementing the disclosure of Chen who discloses a notification that physical routes of affected connections have changed is transmitted by the bridge layer to an application in the application layer, because the teaching lies in Chen that it is desirable for the an application of the application layer to receive notification of change in a service, for example when a physical route of the service changes.

While Allen in view of Chen discloses notifying, within one node of an ad-hoc network, changes of state to at least one application of an application layer, Allen in view of Chen does not expressly disclose the changes of state of the resources of the ad-hoc

network. However the limitation would be rendered obvious in view of the teachings of Kennedy USP (6,754,192).

Kennedy discloses a method of notifying a node the changes of state in the resources of an ad-hoc (**see Fig. 1**) network, **(see Col. 2 lines 58-67 & Col. 3 lines 1-35 e.g., each mobile node comprises a controller which includes route tables defining routes in the network, wherein a route is defined by a set of links and nodes (resources of ad-hoc network) from a source to a destination. The controller also includes a route discovery module to discover routes and update the route tables with one of a plurality of route discovery processes, proactive and reactive route discovery processes)**

Kennedy teaches new applications are important in mobile ad hoc networks and a serious challenge is faced when nodes in a network must self organize due to a lack of a fixed infrastructure and information becomes obsolete due to changes in the network topology occurs, **see Col. 1 lines 35-65.** Kennedy suggests a routing protocol needs to adapt to frequent topology changes, **see Col. 1 lines 65-66)**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the change of state notification means which notifies an application at the application layer within a node of an ad-hoc network to switch to a different routing protocol as taught by Allen in view of Chen, to be based on a change of state of the

resources of the ad-hoc network by implementing the teachings of Kennedy who discloses updating routes in a routing table within a node which is based upon a set of links and nodes from a source to a destination in an ad-hoc network, because the teaching lies in Kennedy to adapt to frequent topology changes in a mobile ad hoc network.

While the combination of Allen in view of Chen, and further in view of Kennedy disclose an application at the application layer with a change of state notification means within a node of an ad-hoc network, the combination of the Allen in view of Kennedy do not expressly disclose registering said at least one application with the change of state notification means. However the limitation would be rendered obvious in view of the teachings of Upton US (2003/0093403)

Referring to Fig. 1, Upton illustrates Client application 100 interfaces Application View 102 in order to receive occurrences of different events from an External EIS server 104. The client registers with the application view 102 for notification of the events, (**see Para [0038] & [0050]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for registering the application of Allen in view of Chen, and further in view of Kennedy with the change of state notification means provided within the one node in order to receive the change of state of the resources, by implementing the teachings of

Upton who discloses a client application registering with an application view interface which receives from an external server, an update of events.

Regarding Claim 2, the combination of Allen in view of Chen, further in view of Kennedy, and further in view of Upton disclose a change-of-state notification method according to claim 1, wherein, during the registering by which the application was registered with the change-of-state notification means (**Upton see Para [0088]**), a fraction of nodes and/or of links of the network is selected so that the information that is extracted and forwarded to said application is routing information relating to said selected fraction of the nodes and/or of the links, (**See Kennedy Col. 3 Lines 5-10 & Col. 5 Lines 35-47**)

Regarding Claim 3, the combination of Allen in view of Chen, further in view of Kennedy, and further in view of Upton disclose a change-of-state notification method according to claim 1, wherein the routing information is extracted by interrogating a routing protocol implemented in the ad-hoc network, (**Kennedy further teaches an ad-hoc network see Col. 2 Lines 35-40. Kennedy further teaches a reactive routing protocol which interrogates routing information from updated route tables when necessary, see Col. 5 Lines 1-10**).

Regarding Claim 4, the combination of Allen in view of Chen, further in view of Kennedy, and further in view of Upton, disclose a change-of-state notification method according to claim 3, wherein the routing information is extracted from routing tables exchanged by a proactive routing protocol of the ad-hoc network, (**Kennedy further teaches a proactive OLSR routing protocol is implemented by providing route information from routing tables, see Col. 6 Lines 60-67**).

Regarding Claim 5, the combination of Allen in view of Chen, further in view of Kennedy, and further in view of Upton disclose a change-of-state notification method according to claim 1, further including a step of dynamically extending the notification means during which new extraction rules are introduced into the notification means corresponding to new routing information that has been deployed on the ad-hoc network network, (**Kennedy further teaches new routing information in the network where a proactive protocol is switched to a reactive protocol, and a new route information is determined, Col. 9 see Lines 38-45**).

Regarding Claim 6, Allen discloses a computer-readable recording medium storing a computer program for performing, within one node (**see Fig. 2, Node 102**) of an ad-hoc network (**see Fig. 2 & Para [0005] & [0021]**), a change of state notification method, the method executed by a computer, wherein the program includes, for an application (**see Fig. 3, Application 316**) of the one node, the application being sensitive to changes of

state of the ad-hoc network (**see Fig. 4, Step 418**), instructions causing the computer to operate the one node of the ad-hoc network as follows (**see Para [0041-0042]**):

Operate as means for the application of the one node (**see Fig. 3, Application 316**) with a change of state notification means provided on the one node, (**see Fig. 4, Step 418 Para [0025-0026] & [0033-0035]**)

Operate as means for extracting routing information from a transport or network layer (**see Fig. 3, Network Layer 312**) of the ad-hoc network (**see Fig. 2**), with said change-of-state notification means, (**Referring to Fig. 3, when the device 102 receives a command to operate according to another routing protocol, routing information will be extracted from (308, 310, 312) via Network Layer 312, see Fig. 4 Step 418 & Para [0025] - [0026] lines 5-9 & Para [0033] e.g., switching to another protocol)**

While Allen discloses an application of the application layer, which uses a particular networking routing protocol, where a change to another routing protocol may be implemented based on which particular routing protocol works best for the application, (**Para [0026] lines 5-9**), Allen does not expressly disclose means for forwarding said routing information extracted by the notification means to the application, so that the application can exploit said routing information. However the limitation would be rendered obvious in view of the teachings of Chen et al. USP (7,283,466).

forwarding said routing information extracted by the notification means to the application (**see Fig. 1, SLM 102**), so that the application can exploit said routing information, (**see Fig. 6B & Col. 2 lines 44-59 & Col. 6 line 57 – Col. 7 lines 1-5**)

(Referring to (**Col. 2 lines 44-50**), Chen suggests the SLM 102 (**e.g., application**) monitors the status of services on the network, hence it is desirable for the SLM 102 to receive notification of change in a service, for example when a physical route of the service changes).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for forwarding said routing information extracted by the notification means to the application of the application layer of Allan by implementing the disclosure of Chen who discloses a notification that physical routes of affected connections have changed is transmitted by the bridge layer to an application in the application layer, because the teaching lies in Chen that it is desirable for the an application of the application layer to receive notification of change in a service, for example when a physical route of the service changes.

In regards to **Para [0033]** of the applicant's specification (US (2007/0070912), the change of state notification means refer to the change of state in the resources of the ad-hoc network.

While Allen in view of Chen discloses notifying, within one node of an ad-hoc network, changes of state to at least one application, Allen in view of Chen does not expressly disclose the changes of state means including change of state in the resources of the ad-hoc network. However the limitation would be rendered obvious in view of the teachings of Kennedy USP (6,754,192).

Kennedy discloses a method of notifying a node the changes of state in the resources of an ad-hoc **(see Fig. 1)** network, **(see Col. 2 lines 58-67 & Col. 3 lines 1-35 e.g., each mobile node comprises a controller which includes route tables defining routes in the network, wherein a route is defined by a set of links and nodes (resources of ad-hoc network) from a source to a destination. The controller also includes a route discovery module to discover routes and update the route tables with one of a plurality of route discovery processes, proactive and reactive route discovery processes)**

Kennedy teaches new applications are important in mobile ad hoc networks and a serious challenge is faced when nodes in a network must self organize due to a lack of a fixed infrastructure and information becomes obsolete due to changes in the network topology occurs, **see Col. 1 lines 35-65.** Kennedy suggests a routing protocol needs to adapt to frequent topology changes, **see Col. 1 lines 65-66)**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the change of state notification means which notifies an application within a node of an ad-hoc network to switch to a different routing protocol as taught by Allen in view of Chen, to be based on a change of state of the resources of the ad-hoc network by implementing the teachings of Kennedy who discloses updating routes in a routing table within a node which is based upon a set of links and nodes from a source to a destination in an ad-hoc network, because the teaching lies in Kennedy to adapt to frequent topology changes in a mobile ad hoc network.

While the combination of Allen in view of Chen, and further in view of Kennedy disclose means for an application with a change of state notification means within a node of an ad-hoc network, the combination of Allen in view of Chen, and further in view of Kennedy do not expressly disclose registering the application of the one node with the change of state notification means. However the limitation would be rendered obvious in view of the teachings of Upton US (2003/0093403)

Referring to Fig. 1, Upton illustrates Client application 100 interfaces Application View 102 in order to receive occurrences of different events from an External EIS server 104. The client registers with the application view 102 for notification of the events, (**see Para [0038] & [0050]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to operate as means for registering the application of Allen in view of Chen, and further in view of Kennedy with the change of state notification means provided within the one node in order to receive the change of state of the resources, by implementing the teachings of Upton who discloses a client application registering with an application view interface which receives from an external server, an update of events.

Regarding Claim 7, Allen discloses a system for notifying, within one node (**see Fig. 2, Node 102**) of an ad-hoc network (**see Fig. 2 & Para [0005] & [0021]**), changes of state of the ad-hoc network, the system comprising the ad-hoc network, and at least one application (**see Fig. 3, Application 316**) adapted to execute on the ad-hoc network (**see Fig. 3 & Para [0025]**), the at least one application being sensitive to changes of state of the ad-hoc network (**see Fig. 4, Step 418**), and including a computer program installed on one node of the ad-hoc network, the program including, for an application of the one node, instructions for causing the one node to operate as follows, (**see Para [0041-0042]**):

Operate as means for the application of the one node (**see Fig. 3, Application 316**) with a change of state notification means provided on the one node, (**see Fig. 4, Step 418 & Para [0025-0026] & [0033-0035]**)

Operate as means for extracting routing information from a transport or network layer (**see Fig. 3, Network Layer 312**) of the ad-hoc network (**see Fig. 2**), with said change-of-state notification means, (**Referring to Fig. 3, when the device 102 receives a command to operate according to another routing protocol, routing information will be extracted from (308, 310, 312) via Network Layer 312, see Fig. 4 Step 418 & Para [0025] - [0026] lines 5-9 & Para [0033] e.g., switching to another protocol)**

While Allen discloses an application of the application layer, which uses a particular networking routing protocol, where a change to another routing protocol may be implemented based on which particular routing protocol works best for the application, (**Para [0026] lines 5-9**), Allen does not expressly disclose means for forwarding said routing information extracted by the notification means to the application, so that the application can exploit said routing information. However the limitation would be rendered obvious in view of the teachings of Chen et al. USP (7,283,466).

forwarding said routing information extracted by the notification means to the application (**see Fig. 1, SLM 102**), so that the application can exploit said routing information, (**see Fig. 6B & Col. 2 lines 44-59 & Col. 6 line 57 – Col. 7 lines 1-5**)

(Referring to (**Col. 2 lines 44-50**), Chen suggests the SLM 102 (**e.g., application**) monitors the status of services on the network, hence it is desirable for the SLM 102 to

receive notification of change in a service, for example when a physical route of the service changes).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for forwarding said routing information extracted by the notification means to the application of the application layer of Allan by implementing the disclosure of Chen who discloses a notification that physical routes of affected connections have changed is transmitted by the bridge layer to an application in the application layer, because the teaching lies in Chen that it is desirable for the an application of the application layer to receive notification of change in a service, for example when a physical route of the service changes.

In regards to **Para [0033]** of the applicant's specification (US (2007/0070912), the change of state notification means refer to the change of state in the resources of the ad-hoc network.

While Allen in view of Chen discloses notifying, within one node of an ad-hoc network, changes of state to at least one application, Allen in view of Chen does not expressly disclose the changes of state means including change of state in the resources of the ad-hoc network. However the limitation would be rendered obvious in view of the teachings of Kennedy USP (6,754,192).

Kennedy discloses a method of notifying a node the changes of state in the resources of an ad-hoc (**see Fig. 1**) network, (**see Col. 2 lines 58-67 & Col. 3 lines 1-35 e.g., each mobile node comprises a controller which includes route tables defining routes in the network, wherein a route is defined by a set of links and nodes (resources of ad-hoc network) from a source to a destination. The controller also includes a route discovery module to discover routes and update the route tables with one of a plurality of route discovery processes, proactive and reactive route discovery processes**)

Kennedy teaches new applications are important in mobile ad hoc networks and a serious challenge is faced when nodes in a network must self organize due to a lack of a fixed infrastructure and information becomes obsolete due to changes in the network topology occurs, **see Col. 1 lines 35-65.** Kennedy suggests a routing protocol needs to adapt to frequent topology changes, **see Col. 1 lines 65-66**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the change of state notification means which notifies an application within a node of an ad-hoc network to switch to a different routing protocol as taught by Allen in view of Chen, to be based on a change of state of the resources of the ad-hoc network by implementing the teachings of Kennedy who discloses updating routes in a routing table within a node which is based upon a set of links and nodes from a source to a destination in an ad-hoc network, because the teaching lies in Kennedy to adapt to

frequent topology changes in a mobile ad hoc network.

While the combination of Allen in view of Chen, and further in view of Kennedy disclose means for an application with a change of state notification means within a node of an ad-hoc network, the combination of Allen in view of Chen, and further in view of Kennedy do not expressly disclose registering the application of the one node with the change of state notification means. However the limitation would be rendered obvious in view of the teachings of Upton US (2003/0093403)

Referring to Fig. 1, Upton illustrates Client application 100 interfaces Application View 102 in order to receive occurrences of different events from an External EIS server 104. The client registers with the application view 102 for notification of the events, **(see Para [0038] & [0050])**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to operate as means for registering the application of Allen in view of Chen, and further in view of Kennedy with the change of state notification means provided within the one node in order to receive the change of state of the resources, by implementing the teachings of Upton who discloses a client application registering with an application view interface which receives from an external server, an update of events.

Regarding Claim 8, Allen discloses a node (**see Fig. 2, Node 102**) of an ad-hoc network (**see Fig. 2 & Para [0005] & [0021]**), comprising routing applications (**see Fig. 3, Applications 316, 318, 320**), the node storing a computer program including, for an application of the node, the application being sensitive to changes of state of the ad-hoc network, instructions for causing the node to (**see Para [0041-0042]**):

Operate as means for the application of the one node (**see Fig. 3, Application 316**) with a change of state notification means provided on the one node, (**see Fig. 4, Step 418 Para [0025-0026] & [0033-0035]**)

Operate as means for extracting routing information from a transport or network layer (**see Fig. 3, Network Layer 312**) of the ad-hoc network (**see Fig. 2**), with said change-of-state notification means, (**Referring to Fig. 3, when the device 102 receives a command to operate according to another routing protocol, routing information will be extracted from (308, 310, 312) via Network Layer 312, see Fig. 4 Step 418 & Para [0025] - [0026] lines 5-9 & Para [0033] e.g., switching to another protocol)**

While Allen discloses an application of the application layer, which uses a particular networking routing protocol, where a change to another routing protocol may be implemented based on which particular routing protocol works best for the application, (**Para [0026] lines 5-9**), Allen does not expressly disclose means for forwarding said routing information extracted by the notification means to the application, so that the

application can exploit said routing information. However the limitation would be rendered obvious in view of the teachings of Chen et al. USP (7,283,466).

forwarding said routing information extracted by the notification means to the application (**see Fig. 1, SLM 102**), so that the application can exploit said routing information, (**see Fig. 6B & Col. 2 lines 44-59 & Col. 6 line 57 – Col. 7 lines 1-5**)

(Referring to (**Col. 2 lines 44-50**), Chen suggests the SLM 102 (**e.g., application**) monitors the status of services on the network, hence it is desirable for the SLM 102 to receive notification of change in a service, for example when a physical route of the service changes).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for forwarding said routing information extracted by the notification means to the application of the application layer of Allan by implementing the disclosure of Chen who discloses a notification that physical routes of affected connections have changed is transmitted by the bridge layer to an application in the application layer, because the teaching lies in Chen that it is desirable for the an application of the application layer to receive notification of change in a service, for example when a physical route of the service changes.

In regards to **Para [0033]** of the applicant's specification (US (2007/0070912), the change of state notification means refer to the change of state in the resources of the ad-hoc network.

While Allen in view of Chen discloses notifying, within one node of an ad-hoc network, changes of state to at least one application, Allen in view of Chen does not expressly disclose the changes of state means including change of state in the resources of the ad-hoc network. However the limitation would be rendered obvious in view of the teachings of Kennedy USP (6,754,192).

Kennedy discloses a method of notifying a node the changes of state in the resources of an ad-hoc **(see Fig. 1)** network, **(see Col. 2 lines 58-67 & Col. 3 lines 1-35 e.g., each mobile node comprises a controller which includes route tables defining routes in the network, wherein a route is defined by a set of links and nodes (resources of ad-hoc network) from a source to a destination. The controller also includes a route discovery module to discover routes and update the route tables with one of a plurality of route discovery processes, proactive and reactive route discovery processes**)

Kennedy teaches new applications are important in mobile ad hoc networks and a serious challenge is faced when nodes in a network must self organize due to a lack of a fixed infrastructure and information becomes obsolete due to changes in the network

topology occurs, **see Col. 1 lines 35-65.** Kennedy suggests a routing protocol needs to adapt to frequent topology changes, **see Col. 1 lines 65-66)**

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention for the change of state notification means which notifies an application within a node of an ad-hoc network to switch to a different routing protocol as taught by Allen in view of Chen, to be based on a change of state of the resources of the ad-hoc network by implementing the teachings of Kennedy who discloses updating routes in a routing table within a node which is based upon a set of links and nodes from a source to a destination in an ad-hoc network, because the teaching lies in Kennedy to adapt to frequent topology changes in a mobile ad hoc network.

While the combination of Allen in view of Chen, and further in view of Kennedy disclose means for an application with a change of state notification means within a node of an ad-hoc network, the combination of Allen in view of Kennedy, and further in view of Chen do not expressly disclose registering the application of the one node with the change of state notification means. However the limitation would be rendered obvious in view of the teachings of Upton US (2003/0093403)

Referring to Fig. 1, Upton illustrates Client application 100 interfaces Application View 102 in order to receive occurrences of different events from an External EIS server 104.

The client registers with the application view 102 for notification of the events, (**see Para [0038] & [0050]**)

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to operate as means for registering the application of Allen in view of Chen, and further in view of Kennedy with the change of state notification means provided within the one node in order to receive the change of state of the resources, by implementing the teachings of Upton who discloses a client application registering with an application view interface which receives from an external server, an update of events.

Regarding Claim 9, the combination of Allen in view of Chen, further in view of Kennedy and further in view of Upton disclose, a change of state notification method according to claim 4, wherein the proactive routing protocol is the OLSR protocol, (**Kennedy, see Col. 6 Lines 60-67**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ADNAN BAIG whose telephone number is (571) 270-7511. The examiner can normally be reached on Mon-Fri 7:30m-5:00pm eastern Every other Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ADNAN BAIG/
Examiner, Art Unit 2461

/Huy D Vu/

Supervisory Patent Examiner, Art Unit 2461